

Drew Point No. 1 Well Plugging – 2010

Operations Summary

BLM initiated well plugging operations in the Drew Point well area on February 18, 2010 under contract to Marsh Creek Environmental Services. The following legacy well was plugged to surface before the cessation of plugging and excavation operations on March 9, 2010:

Drew Point Well No. 1

The well was drilled in 1978 on Federal NPRA lands at Drew Point on the Beaufort Sea coast as part of the USGS exploration efforts in the National Petroleum Reserve - Alaska. Due to its close proximity to the Beaufort Sea coast and prevailing winds, significant shoreline erosion had advanced into the well location requiring the BLM to complete plugging and abandonment of the wellbore and well site. The well was left suspended and plugged back to 2,153 feet with diesel left in the wellbore. The USGS had been actively using the well for permafrost temperature measurements prior to 2010. Diesel fuel inside the wellbore had been used as a non-freezing medium to aid in conducting the temperature measurements. During well plugging operations, approximately 13,380 gallons of diesel fuel was displaced with NaCl (salt) saturated water prior to completing final plugging operations. The NaCl water was then evacuated from the casing down to a depth of 114 feet below ground level (BGL) and an inflatable plug was run and set at this depth using nitrogen pressure from the surface. Cement was mixed at 15.7 ppg and dumped on top of the plug filling the casing to the surface. The frozen earth around the wellhead was excavated down to 30 feet BGL, the wellhead was cut off 29 feet BGL (8 feet below Mean Sea Level, 6 inches of the 13-3/8" x 20" annulus was filled with cement, an identification plate was welded onto the cut off casing, and the excavated hole was backfilled with clean dirt to four feet above ground level.

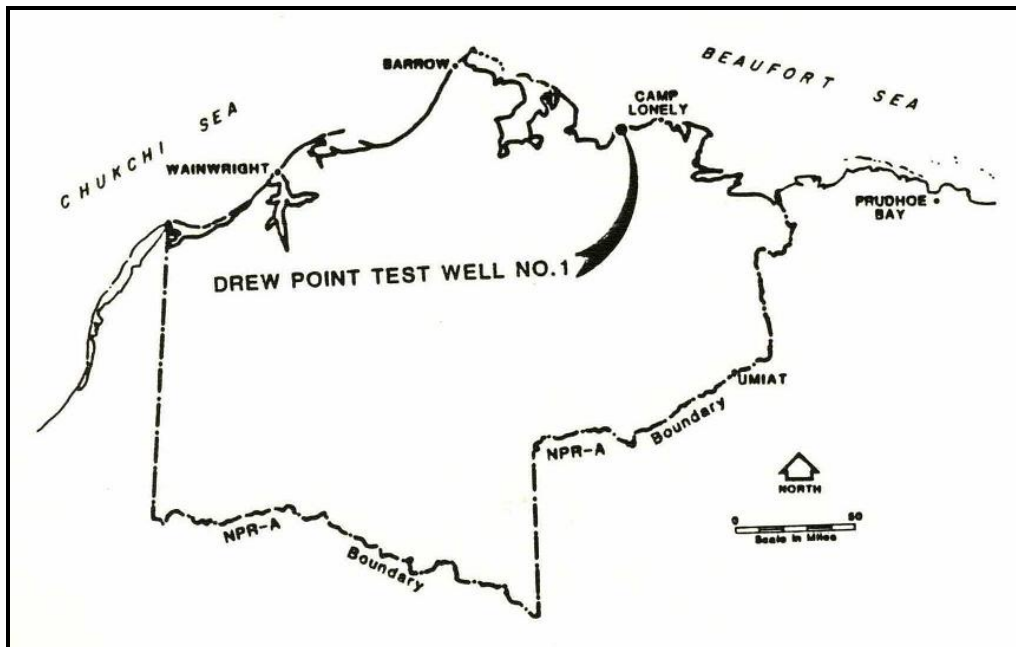


Figure 1: Map of Drew Point No. 1 Well Location

Drew Point No. 1
National Petroleum Reserve - Alaska
Wellbore Configuration After TA
Well Schematic
API # : 50-279-20002-00-00
PTD # : 1001980

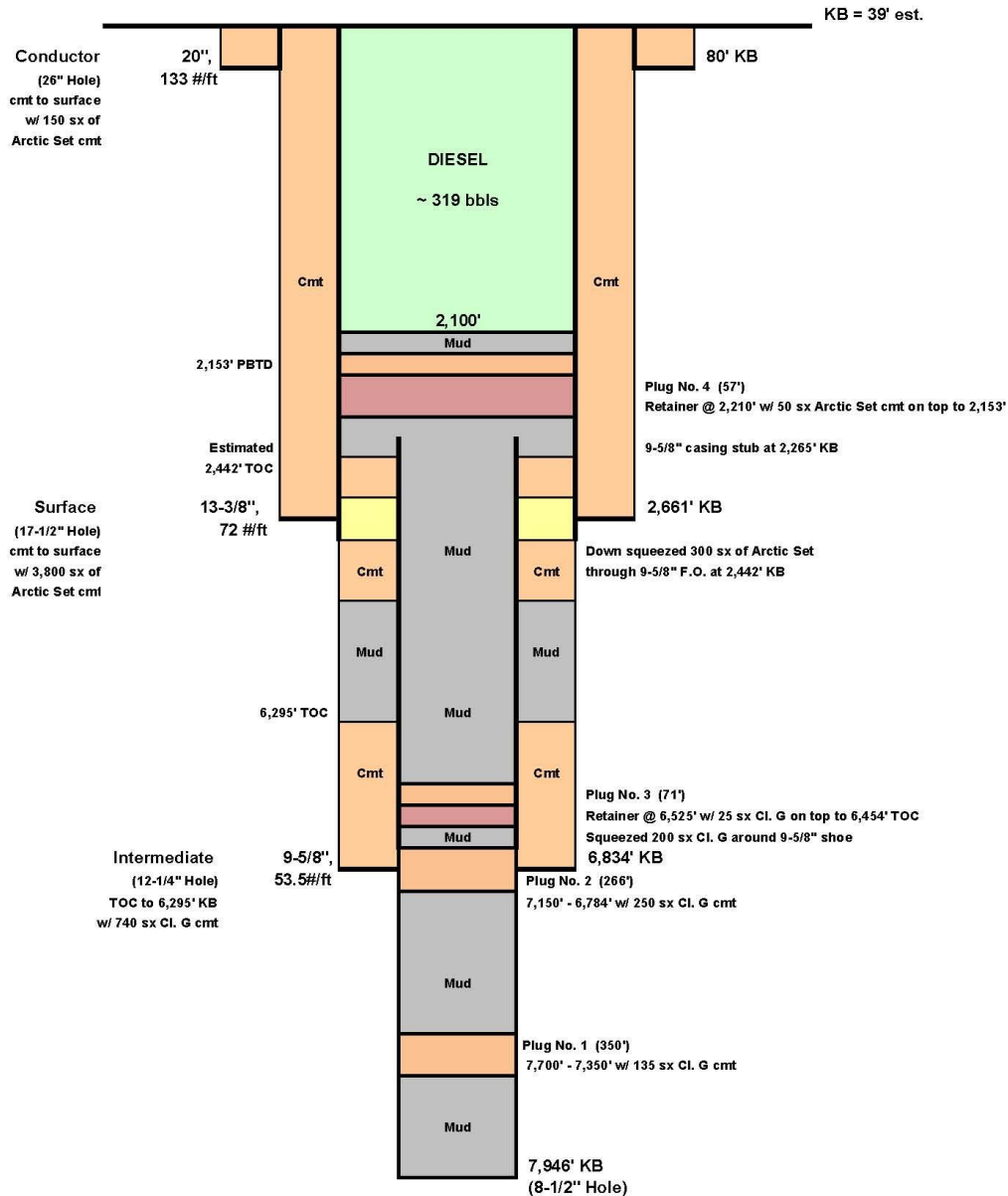


Figure 2: Drew Point No. 1 Well Configuration – December 2009 Status

Drew Point No. 1
National Petroleum Reserve - Alaska
Final P&A Configuration
Well Schematic
API # : 50-279-20002-00-00
PTD # : 1001980

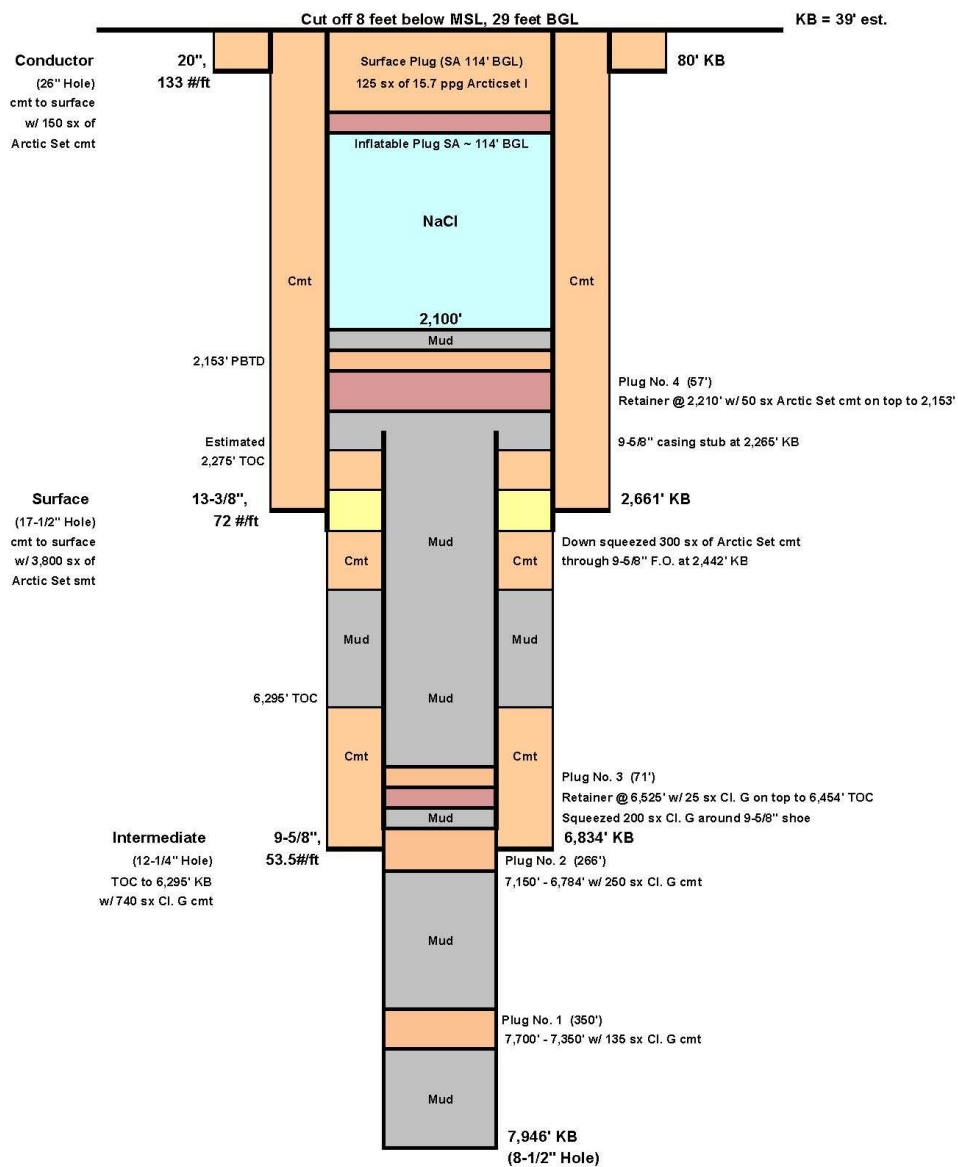


Figure 3: Drew Point No. 1 Well Configuration – March 2010 Status



Figure 4: Drew Point No. 1 wellhead – August 2006 – Facing Southeast



Figure 5: Drew Point well location – June 2003 – North Facing



Figure 6: Coastal erosion on Beaufort Sea – June 2007 – Facing East



Figure 7: Wellhead at location – February 2010 – Facing Northeast



Figure 8: Displacing diesel with NaCl water – February 2010



Figure 9: Wellhead cut off after diesel displaced with NaCl water – March 2010



Figure 10: Preparing to lower and set inflatable plug at 114 feet BGL - March 2010



Figure 11: Wellhead after cementing to surface and before excavation – March 2010



Figure 12: Wellhead location after clearing PxA equipment – March 2010



Figure 13: Preparing for first drill and shoot blast and excavation – March 2010



Figure 14: Well location after first drill and shoot blast – March 2010



Figure 15: Wellhead location after cleanout to 14 feet BGL after first drill and shoot – March 2010



Figure 16: Cut off first wellhead section at 13 feet BGL – March 2010



Figure 17: Preparing for second drill and shoot blast and excavation – March 2010



Figure 18: Final excavation to 30 feet BGL (green line at 5 feet below MSL) – March 2010



Figure 19: Cutting off second wellhead section at 29 feet BGL (8 feet below MSL) – March 2010



Figure 20: Final wellhead cut off at 29 feet BGL with 6 inch deep annulus void – March 2010



Figure 21: Final wellhead cut off at 8 feet below MSL and 13-3/8"x 20" annulus filled – March 2010



Figure 22: Wellhead ID marker plate installed – March 2010



Figure 23: Final well surface location after backfilling cellar and mounding location – March 2010